

The black holes in the hearts of galaxies

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In the past 20 years, astronomers have discovered that almost every galaxy contains a black hole at its center. These black holes outweigh our sun by a factor of a million to a billion. Surprisingly, there's a very tight connection between the size of the galaxy and its central black hole -- the bigger the galaxy, the bigger the black hole. We don't know why this relationship exists -- how can a black hole, with a sphere of influence the size of our solar system, know what kind of galaxy it inhabits? What processes create this relationship? I'll explore these topics, and show how new space telescopes are helping us discover thousands of black holes and explore how they evolve with time.

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